

LASER SCRIBING METHOD

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Abstract

PURPOSE: To perform uniform working by bringing an annular and cylindrical projection in tight contact with the circumferential part of a piece to be worked on the top surface of a stage and irradiating a laser in performing laser scribing.

CONSTITUTION: The laser light 11 released from a laser oscillator 10 is made incident by a condenser lens 12 to a sapphire 13. The stage 14 on the holding side of the sapphire 13 has a large number of suction holes connecting to a vacuum suction device on the top surface 15 thereof and is provided with a cylindrical projection 16 having an annular holding surface contacting only the circumferential edge part of the sapphire 13. In scribe working, the rear surface corresponding to the greater part of the surface irradiated by the laser light 11 is spaced from the top surface 15 of the stage 14 by the projection 16 and therefore the diffusion and absorption of the laser light 11 in to the stage 14 is obviated, the depth of scribing is increased, the temp. distribution on the rear side of the sapphire is made constant and the variance in the depth of scribing is decreased.

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